



Attorney's Docket No. 1003918-000025

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Edward Rodriguez et al.

Application No.: 09/811,823

Filed: March 20, 2001

For: METHOD AND SYSTEM FOR  
ELECTRONIC VOTER  
REGISTRATION AND  
ELECTRONIC VOTING OVER A  
NETWORK

Group Art Unit: 3621

Examiner: NANCY LOAN T LE

Appeal No.: \_\_\_\_\_

APPEAL BRIEF

Mail Stop APPEAL BRIEF - PATENTS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This appeal is from the decision of the Primary Examiner dated Nov. 28, 2007 finally rejecting claims 1-47, which are reproduced as the Claims Appendix of this brief.

- ☐ A check covering the ☐ \$ 255 ☐ \$ 510 Government fee is filed herewith.
- ☒ Charge ☐ \$ 255 ☒ \$ 510 to Deposit Account No. 02-4800. A duplicate copy of this paper is attached.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

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I. Real Party in Interest

The present application is assigned to Booz Allen Hamilton Inc. and Booz Allen Hamilton Inc. is the real party in interest.

II. Related Appeals and Interferences

The Appellants' legal representative, or assignee, does not know of any other appeal or interferences which will affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-47 are pending, and are subject to final rejection. The final rejection of claims 1-47 is the subject of this Appeal.

IV. Status of Amendments

All prior amendments have been entered, and there are no pending amendments after final.

V. Summary Of Claimed Subject Matter

Exemplary embodiments of the present invention are directed to establishing a registered voter over a computer network via submission of an electronic registration form. A voter who registered via a first computer can later submit an electronic ballot over the network from a second computer, and monitor status of the registration and voting process.

Appellant's Figure 1 illustrates an exemplary system 100 for completing and submitting an electronic voter registration form, where the user interfaces with a first of the computers 104. The system 100 accommodates later submission of an electronic voted ballot from, for example, a second of the computers 104. Although electronic voting systems have been proposed in the past, Appellants' disclosed

embodiments are configured to also allow registration and status monitoring over the network using a transaction repository server. Registration and voting status can be established and/or monitored over a public network, such as the Internet, in a secure and private manner (see, e.g., Spec. pg. 2, ¶ [0004].

Appellants' Figure 2 illustrates an exemplary method for **establishing electronic voter registration** and Figure 3 illustrates an exemplary method for a voter to request a voter ballot, and to submit a completed ballot in a secure and private manner. Figure 2 illustrates a step 204 in which a citizen 102 can request registration to vote (see specification page 13, paragraph [0033], lines 4-5). As described in paragraph [0042] on specification page 20, once a citizen 102 becomes a registered voter, a separate request to vote can be made in step 304 of Figure 3A.

Thus, Appellants' disclosed establishment of a registered voter over a computer network is separate and distinct from the ability to actually vote over the computer network. The disclosed system allows a voter to register using a **first computer**, and allows a registered voter to then transmit an electronic ballot from a **second (different) computer**.

Claim 1, which encompasses the foregoing features, is directed to a method for completing and submitting an electronic voter registration form and an electronic ballot over a network. Claim 1 recites, among other features, transmitting registration information from a first computer, via the transaction mediator, to a computer database that resides on a transaction repository server, all of which are networked together, to **establish a registered voter**, such that the registered voter can receive a blank electronic ballot transmitted to a **second computer** and/or transmit a voted electronic ballot from the second computer. Claims 23, 32 and 41 encompass similar aspects of the electronic registration and voting features of the disclosed embodiments.

Claims 20 and 46 are directed to a method and system whereby a first computer connected to a computer network can be used by a **citizen** to request at least one of the citizen's **voter registration status** and the citizen's **electronic ballot status**, using a system like that shown in Appellants' Figure 1. Such a feature constitutes a novel mechanism by which the citizen can track the status of his or her voter registration and/or electronic ballot.

The subject matter of each independent claim on appeal (claims 1, 20, 23, 32, 41 and 46) is cross-referenced to the specification and/or drawing figures in the following table:

1. (Original) A method for completing and submitting an electronic voter registration form and an electronic ballot over a network, comprising the steps of:	Spec. pg. 2, ¶ [0007], lines 1-2 Fig. 2 (registration); Fig. 3 (electronic voter ballot)
transmitting a blank electronic registration form, upon request at a first computer, via a transaction mediator, to the first computer;	Spec. pg. 2, ¶ [0007], line 2 to spec. pg. 3, line 1; Fig. 1, transaction mediator server 108; first computer 104; Fig. 2, block 208; Spec. pg. 13, ¶ [0033], line 9 to spec. pg. 14, line 3; Spec. pg. 13, ¶ [0036], lines 1-4
transmitting registration information from the first computer, via the transaction mediator, to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter;	Spec. pg. 3, lines 1-4 Fig. 2, block 220, 226, 232 Fig. 1, transacting repository server 110 Spec. pg. 16, ¶ [0037], lines 1-5; ¶ [0039], lines 10-12; ¶ [0041], lines 1-3
transmitting a blank electronic ballot, upon request by the registered voter at a second computer, from the computer database that resides on the transaction repository server, via the transaction mediator, to the second computer; and	Spec. pg. 3, lines 4-7 Fig. 3, block 312 Spec. pg. 21, ¶ [0043]
transmitting a voted electronic ballot from the second computer, via the transaction mediator, to the computer database that resides on the transaction repository server.	Spec. pg. 3, lines 7-8 Fig. 3, blocks 326, 332 Spec. pg. 25, ¶ [0050], lines 4-9; ¶ [0051], line 6 to spec. pg. 26, line 4
20. (Previously Presented) A method for verifying at least one of a voter registration status and an electronic ballot status in a voting system, comprising the steps of:	Spec. pg. 3, ¶ [0008], lines 1-2; Fig. 2

establishing at least one computer database on a transaction repository server that contains information associated with at least one of the voter registration status of a citizen and the electronic ballot status;	Spec. pg. 3, ¶ [0008], lines 2-6; Fig. 1, transaction repository server 110 Spec. pg. 29, ¶ [0057]
receiving, from a first computer connected to a computer network, a citizen's request regarding status of at least one of the citizen's voter registration and the citizen's electronic ballot status;	Spec. pg. 3, ¶ [0008], lines 6-7 Fig. 5, block 504 Spec. pg. 30, ¶ [0058], lines 4-7
determining a status message in response to the step of receiving by examining the at least one computer database; and	Spec. pg. 3, ¶ [0008], lines 7-8 Fig. 5, block 508 Spec. pg. 31, lines 1-3
transmitting the status message from the transaction repository server to the first computer over the computer network.	Spec. pg. 3, ¶ [0008], lines 8-9 Fig. 5, block 510 Spec. pg. 31, lines 5-9
23. (Previously Presented) A method for completing and submitting an electronic voter registration form and an electronic ballot transmitted over a network, comprising the steps of:	Spec. pg. 4, lines 1-6 Fig. 2, Fig. 3
transmitting registration information from a first computer to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter; and	Spec. pg 4, lines 1-4 Fig. 2, block 220, 226 Spec. pg. 16, ¶ [0037], lines 1-5; Spec. pg. 18, ¶[0039], lines 10-12
transmitting a voted electronic ballot of the registered voter from a second computer to the computer database that resides on the transaction repository server.	Spec. pg. 4, lines 4-6 Fig. 3, blocks 326, 332 Spec. pg. 25, ¶ [0050], lines 4-9; ¶ [0051], line 6 to pg. 26, line 4
32. (Previously Presented) A method for completing and submitting an electronic registration form and an electronic ballot over a network, comprising the steps of:	Spec. pg. 4, ¶ [0010], lines 1-3 Fig. 2, Fig. 3
transmitting a blank electronic	Spec. pg. 4, ¶ [0010], lines 1-3

registration form, upon request at a first computer, to the first computer; and	Fig. 2, Block 208
transmitting registration information from the first computer to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter, so that a voted electronic ballot can be transmitted from a second computer.	Spec. pg. 4, ¶ [0010], lines 3-5 Fig. 2, blocks 220, 226 Spec. pg. 21, ¶ [0043], lines 1-8 Fig. 3, blocks 308, 326, 332 Spec. pg. 21, ¶ [0044], lines 1-4; ¶ [0051]
41. (Previously Presented) A system for completing and submitting an electronic voter registration form and an electronic ballot over a network, comprising:	Spec. pg. 4, ¶ [0012], lines 1-3 Fig. 1. Fig. 6
a transaction repository server for transmitting a blank electronic ballot to a first computer;	Spec. pg. 4, ¶ [0012], lines 3-4 Fig. 1, transaction repository server 110; first computer 104; Fig. 3, block 312 Spec. p. 21, ¶ [0043], lines 1-8
a computer database, accessible by the transaction repository server, for storing the blank electronic ballot; and	Spec. pg. 5, lines 1-4 Fig. 1 Spec. p. 16, ¶ [0037], lines 1-5 (computer database resides on transaction repository server)
a transaction mediator for communicating information between the transaction repository server and the first computer, the transaction mediator being operative to transmit registration information from the first computer to the computer database to establish a registered voter, so that a voted electronic ballot can be transmitted from a second computer.	Spec. pg. 5, lines 4-10 Fig. 1, transaction mediator 108; second computer (e.g., a second computer 104) Fig. 2 (registration) blocks 220, 226 Fig. 3, (voted ballot); blocks 312, 326, 332
46. (Previously Presented) A system for verifying at least one of a voter registration status and an electronic ballot status in a voting system, comprising:	Spec. pg. 3, ¶ [0008], lines 2-7 Fig. 1, Fig. 5, Fig. 6
a first computer connected to a computer	Spec. pg. 3, ¶ [0008], lines 2-7

network by which a citizen can request at least one of the citizen's voter registration status and the citizen's electronic ballot status from a transaction repository server; and	Fig. 1, first computer 104; transaction repository server 110 Fig. 5, spec. p. 30, ¶ [0058]
at least one computer database, accessible by the transaction repository server, for containing information associated with at least one of the voter registration status of a citizen and the electronic ballot status;	Spec. pg. 3, ¶ [0008], lines 7-10 Fig. 1, Fig. 5 (Spec. p. 16, ¶ [0037], lines 1-5 (computer database on transaction repository server 108)
the transaction repository server being operative for determining a status message in response to the status request by examining the at least one computer database, and for transmitting the status message to the first computer.	Fig. 1, 110 Fig. 5, block 510 Spec. pg. 31, lines 5-9

## VI. Grounds of Rejection to be Reviewed on Appeal

- A. Whether The Examiner has Established A Prima Facie Case Of Obviousness In Rejecting Claims 1-19 and 23-40 Under 35 U.S.C. §103(a) Over U.S. Patent No. 6,250,548 (McClure et al) In View Of U.S. Patent No. 6,311,190 (Bayer et al).
- B. Whether Claims 20-22 and 41-47 Are Properly Rejected Under 35 U.S.C. §102(e) As Being Anticipated By U.S. Patent No. 6,250,548 (McClure et al)

## VII. Argument

- A. The Examiner has Failed To Establish A Prima Facie Case Of Obviousness In Rejecting Claims 1-19 and 23-40 Under 35 U.S.C. §103(a) Over U.S. Patent No. 6,250,548 (McClure et al) In View Of U.S. Patent No. 6,311,190 (Bayer et al).

Independent claims 1, 23, and 32 are allowable over U.S. Patent No. 6,250,548 (McClure), considered either individually or in view of U.S. Patent No. 6,311,190 (Bayer et al), because the Examiner has not established a prima facie



case of obviousness and because these documents, even in combination, fail to disclose all elements of the presently claimed invention. For example, Appellant's claim 1 is directed to a method which uses a transaction repository server to **establish registration** of a voter from a first computer over a computer network (e.g., the Internet), such that the registered voter can transmit a voted electronic ballot from a second computer. Such features are simply not taught or suggested by the McClure and Bayer patents, considered individually or in the combination relied upon by the Examiner. Independent claims 23 and 32 recite similar features.

The Examiner has the initial burden of establishing a factual basis to support the legal conclusion of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in KSR Int'l v. Teleflex Inc., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (emphasis added). For at least the foregoing reasons, withdrawal of the rejections under 35 U.S.C. §103(a) is requested.

The McClure patent is directed to a voting system wherein registration is performed beforehand. The system of McClure is directed to a voting system. Column 36, lines 23 et al. of the McClure patent, refers to "the process of casting a ballot using the Internet." There is no discussion in column 36, lines 23-30 of registration occurring over the computer network. Column 36, lines 30 et al. describe a voting process "once" a voter is already registered. In other words, a voter must supply all information necessary to pre-register and that information is included in a database. When a voter then later initiates the voting process, information regarding the voter's registration can be accessed so that the voter can identify themselves and begin the voting process (e.g., through the provision of, for example, a password as described at column 36, lines 37-39). A request to vote, as

described in this portion of the McClure patent, simply does not disclose or suggest Appellants' claimed methods and systems for establishing voter registration.

In rejecting independent claim 1, the Examiner acknowledges on page 2 of the Office Action that:

McClure et al. do not expressly disclose such a method comprising the steps of:

- transmitting a blank electronic registration form, upon request at a first computer, via a transaction mediator, to the first computer;
- transmitting registration information from the first computer, via the transaction mediator, to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter;

However, the Examiner relies on the Abstract of the Bayer patent as disclosing these features, and asserts on page 3 of the Office Action:

Therefore, it would have been obvious to and motivated by an ordinary skill in the art at the time the invention was made to modify a method for completing and submitting an electronic voter registration form and an electronic ballot over a network as disclosed by McClure et al. to include **"transmitting a blank electronic registration form, upon request at a first computer, via a transaction mediator, to the first computer; transmitting registration information from the first computer, via the transaction mediator, to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter"** as suggested by Bayer et al. to establish a registered voter over the network.

Although Appellants' contested this unsubstantiated assertion of obviousness, on page 1 of the final Office Action, under the heading "Response to Arguments", the Examiner asserts in the last sentence:

The Office respectfully disagrees as the Bayer reference indeed teaches "transmitting a blank electronic registration form, upon request at a first computer, via a transaction mediator, to the first computer" (Abstract, col. 29, line 64 - col. 30, line 8); and "transmitting registration information from the first computer, via the transaction mediator, to a computer database that resides

on a transaction repository server, all of which are networked together, to establish a registered voter" (col. 30, lines 8-12).

This rejection based on the McClure and Bayer patents is respectfully traversed because it is an unsubstantiated assertion of obviousness, and because it does not address Appellants' claimed systems and methods wherein registration can be established from a first computer as a precondition to an electronic ballot being transmitted upon request at a second computer. The last sentence of the Abstract in the Bayer patent and col. 29, line 64 to col. 3, line 13 of the Bayer patent, are directed to providing a system by which a voter can submit registration information to a network server. There is no teaching or suggestion in the cited portions of the Bayer patent of a system that can actually **establish** that a voter is registered, such that the registered voter can receive a blank ballot upon request at a second computer (see Appellants' claim 1). The Bayer patent is not directed to citizen elections, and merely describes a database for receiving data. No mechanism is disclosed for using the data to "establish" a registered voter so that the registered voter can receive an electronic ballot and/or transmit a voted electronic ballot from a second computer.

The Bayer patent is directed to a system for conducting surveys to voters in different languages. Mention is made in the Bayer patent Abstract of registering voters over a network, such as the Internet. The Bayer patent is directed to polling (surveying) voters in numerous countries, and then providing the results of the surveys. (See column 1, lines 19-23). However, the registration described in the Bayer patent is merely directed to requesting and then storing user-provided registration information, and an administrator can modify both the survey questions and responses. There is no discussion in the Bayer patent of providing any ability to "establish" a registered voter so that an electronic ballot can be transmitted to the registered voter at a second computer. As such, it would not have been obvious to one skilled in the art to have combined features described in the Bayer patent with features of the McClure patent in the manner suggested by the Examiner to arrive at Appellants' presently claimed invention. Independent claim 1 is therefore allowable over the McClure and Bayer patents.

Claim 1 recites, among other features, transmitting registration information from a first computer, via the transaction mediator, to a computer database that resides on a transaction repository server, all of which are networked together, to **establish** a registered voter. Claim 1 recites that a registered voter can receive a blank electronic ballot transmitted to a second computer and/or transmit a voted electronic ballot from the second computer.

Even if the McClure and Bayer patents could have been combined in the manner suggested by the Examiner, the presently claimed invention would not have resulted. As already discussed, the McClure patent is not directed to electronic voter registration. This patent does not **establish** a registered voter. The Bayer patent fails to overcome these deficiencies because it does not disclose establishing registration as a precondition for participation in receiving and/or transmitting an electronic ballot.

Moreover, neither of these patents teach or suggest how to register from a first computer and permit the ability to provide voting from a second computer. The McClure and Bayer patents place data on a client computer, so that a user can return to that computer for subsequent actions. For example, the Bayer patent is directed to the use of browser cookies (see column 3, lines 29-34, for example) placed on a client computer to assist with subsequent actions executed on that computer. However, neither patent is directed to establishing a registered voter over a network such that the registered voter has an option to receive and transmit an electronic ballot via a second computer as recited in independent claim 1.

As such, independent claim 1 is allowable over the McClure and Bayer patents, considered individually or in the combination relied upon by the Examiner. Claims 23 and 32 recite similar features, and are therefore also allowable.

B. The Examiner Has Failed To Establish Whether Claims 20-22 and 41-47 Are Properly Rejected Under 35 U.S.C. §102(e) As Being Anticipated By U.S. Patent No. 6,250,548 (McClure et al)

Independent claim 41 recites features directed to a system for completing and submitting an electronic voter registration form and an electronic ballot over a network, and is allowable for reasons similar to those discussed with respect to claim

1. The Examiner has not established how the McClure patent anticipates the claim 41 features of a transaction mediator for communicating information between a transaction repository server and a first computer, the transaction mediator being operative to transmit registration information from the first computer to the computer database to establish a registered voter, so that a voted electronic ballot can be transmitted from a second computer. As such, claim 41 is allowable.

Independent claims 20 and 46 recite, among other features, use of a first computer connected to a computer network, by which a citizen can make a dedicated **request for status** of the citizen's voter registration status or electronic ballot status. The McClure patent does not teach or suggest any ability to make a separate request specifically for the citizen's voter registration status or the citizen's electronic ballot status. Known electronic voting systems have not provided an ability for a "citizen" (e.g., a member of the voting public), as opposed to, for example, the election officials at a voting headquarters, to monitor the status of the citizen's voter registration and/or the citizen's voting ballot. Claims 20 and 46 are therefore allowable.

Claims 20 and 46 are directed to a method and system whereby a first computer connected to a computer network can be used **by a citizen** to request at least one of a citizen's voter registration status and the citizen's electronic status. In rejecting claim 20 on page 12 of the Office Action, the Examiner asserts that the features of claim 20 are disclosed by the McClure patent.

To the contrary, the McClure patent neither teaches nor suggests any ability of a **citizen** to specifically request a **status**, via a computer connected to a network such as the Internet, of at least one of a voter registration and an electronic ballot status. The Examiner refers to column 36, lines 30-33, lines 59-67 and column 33, lines 22-27 with respect to a "vote request" in the McClure patent. It is respectfully submitted that a "vote request" does not constitute a citizen's request for the status of voter registration and/or electronic ballot status, as is presently claimed by Appellants.

Appellants' presently claimed invention regarding status verification is, for example, described with respect to Figure 5. As discussed on Appellants' specification pages 30 et al., a citizen can make a dedicated request for status of

their voter registration and/or electronic ballot over a computer network, a capability which simply does not exist in known computer network based voting systems.

Any implicit status request that a voter may derive from feedback received in the system of McClure does not constitute Appellant's claim 20 method which includes a step of receiving, from a first computer connected to a computer network, **a citizen's request regarding status** of at least one of the citizen's voter registration and the citizen's electronic ballot status, and which results in a transmission of status information to the citizen's computer.

As such, claim 20 is novel over the McClure patent and is allowable. Claim 46 recites features similar to those discussed with respect to claim 20 and is also allowable.

All of the remaining claims depend from the aforementioned independent claims and recite additional advantageous features which further distinguish over the McClure and Bayer patents.

## CONCLUSION

Reversal of the Examiner's final rejection of Claims 1-46, and a Notice of Allowance, are requested.

## VIII. Claims Appendix

See attached Claims Appendix for a copy of the claims involved in the appeal.

## IX. Evidence Appendix

See attached Evidence Appendix for copies of evidence relied upon by Appellant.

X. Related Proceedings Appendix

See attached Related Proceedings Appendix for copies of decisions identified in Section II, supra.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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## VIII. CLAIMS APPENDIX

### The Appealed Claims

1. (Original) A method for completing and submitting an electronic voter registration form and an electronic ballot over a network, comprising the steps of:

transmitting a blank electronic registration form, upon request at a first computer, via a transaction mediator, to the first computer;

transmitting registration information from the first computer, via the transaction mediator, to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter;

transmitting a blank electronic ballot, upon request by the registered voter at a second computer, from the computer database that resides on the transaction repository server, via the transaction mediator, to the second computer; and

transmitting a voted electronic ballot from the second computer, via the transaction mediator, to the computer database that resides on the transaction repository server.

2. (Original) The method of claim 1, comprising:

establishing at least one computer database on the transaction repository server that contains information associated with at least one of a voter registration status of a citizen and a electronic ballot status;

requesting a status at the first computer from the transaction repository server;

determining a status message in response to the step of requesting by examining the at least one computer database; and

transmitting the status message from the transaction repository server to the first computer.

3. (Original) The method of claim 2, wherein the voter registration status of the citizen and the electronic ballot status are verified.



4. (Original) The method of claim 1, wherein the network includes:  
an encrypted communication channel between at least one of the first and second computer and the transaction mediator, and an encrypted communication channel between the transaction mediator and the transaction repository server.
5. (Original) The method of claim 1, wherein the registration information includes at least one descriptive element associated with a citizen.
6. (Original) The method of claim 1, wherein the step of transmitting registration information comprises:  
entering the registration information; and  
digitally signing the registration information using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of a citizen, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the registration information.
7. (Original) The method of claim 6, wherein the step of transmitting registration information comprises:  
erasing from the first computer information associated with the registration information once the registration information has been transmitted.
8. (Original) The method of claim 6, wherein the step of transmitting registration information comprises:  
verifying the digital signature using the public key of the public-private key pair.

9. (Original) The method of claim 6, wherein the public-private key pair and the cryptographic identification can be used by the citizen with respect to a plurality of electronic transactions.

10. (Original) The method of claim 1, wherein the step of transmitting registration information comprises:

approving or denying a voting registration request at the computer database based on the registration information of a citizen.

11. (Original) The method of claim 1, wherein the second computer is the first computer.

12. (Original) The method of claim 1, wherein the step of transmitting a blank electronic ballot comprises:

digitally signing the blank electronic ballot using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of an operator of the transaction repository server, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the blank electronic ballot; and

transmitting a public key of a public-private key pair of the transaction repository server.

13. (Original) The method of claim 1, wherein the step of transmitting the voted electronic ballot comprises:

executing the blank electronic ballot;

encrypting the voted electronic ballot using a symmetric cryptographic function and a symmetric key that is randomly generated by the second computer;

encrypting the symmetric key using a public key of a public-private key pair of the transaction repository server; and

digitally signing the encrypted voted electronic ballot and the encrypted symmetric key using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of the registered voter, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the voted electronic ballot.

14. (Original) The method of claim 13, comprising:

erasing from the second computer information associated with the encrypted voted electronic ballot once the voted electronic ballot has been transmitted.

15. (Original) The method of claim 13, comprising:

verifying the digital signature of the encrypted voted electronic ballot and the encrypted symmetric key using the public key of the public-private key pair of the registered voter.

16. (Original) The method of claim 13, comprising:

reconciling transmitted voted electronic ballots by an operator of the transaction repository server to establish the validity of each transmitted voted electronic ballot.

17. (Original) The method of claim 16, comprising:

separating a plurality of valid encrypted voted electronic ballots into groups based on at least one characteristic;

stripping the digital signature and the cryptographic identification of the registered voter from each group of valid encrypted voted electronic ballots; and

randomly mixing within each group the separated encrypted voted electronic ballots.

18. (Original) The method of claim 17, wherein the at least one characteristic is a type of voted electronic ballot.

19. (Original) The method of claim 17, comprising:

decrypting the encrypted symmetric key of each separated voted electronic ballot using a private key of the public-private key pair of the transaction repository server;

decrypting the encrypted voted electronic ballot using the symmetric key to recover the voted electronic ballot; and

printing the voted electronic ballot.

20. (Previously Presented) A method for verifying at least one of a voter registration status and an electronic ballot status in a voting system, comprising the steps of:

establishing at least one computer database on a transaction repository server that contains information associated with at least one of the voter registration status of a citizen and the electronic ballot status;

receiving, from a first computer connected to a computer network, a citizen's request regarding status of at least one of the citizen's voter registration and the citizen's electronic ballot status;

determining a status message in response to the step of receiving by examining the at least one computer database; and

transmitting the status message from the transaction repository server to the first computer over the computer network.

21. (Original) The method of claim 20, wherein a transaction mediator communicates information between the first computer and the transaction repository server.

22. (Original) The method of claim 20, wherein the voter registration status of the citizen and the electronic ballot status are verified.

23. (Previously Presented) A method for completing and submitting an electronic voter registration form and an electronic ballot transmitted over a network, comprising the steps of:

transmitting registration information from a first computer to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter; and

transmitting a voted electronic ballot of the registered voter from a second computer to the computer database that resides on the transaction repository server.

24. (Original) The method of claim 23, wherein the second computer is the first computer.

25. (Original) The method of claim 23, comprising:

transmitting a blank electronic registration form, upon request at the first computer, to the first computer.

26. (Original) The method of claim 25, comprising:

transmitting a blank electronic ballot, upon request by the registered voter at the second computer, from the computer database that resides on the transaction repository server to the second computer.

27. (Original) The method of claim 23, wherein the step of transmitting registration information comprises:

entering the registration information; and

digitally signing the registration information using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of a citizen, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the registration information.

28. (Original) The method of claim 27, wherein the public-private key pair and the cryptographic identification can be used by the citizen with respect to a plurality of electronic transactions.

29. (Original) The method of claim 26, wherein the step of transmitting a blank electronic ballot comprises:

digitally signing the blank electronic ballot using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of an operator of the transaction repository server, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the blank electronic ballot; and

transmitting a public key of a public-private key pair of the transaction repository server.

30. (Original) The method of claim 23, wherein the step of transmitting the voted electronic ballot comprises:

executing the blank electronic ballot;

encrypting the voted electronic ballot using a symmetric cryptographic function and a symmetric key that is randomly generated by the second computer;

encrypting the symmetric key using a public key of a public-private key pair of the transaction repository server; and

digitally signing the encrypted voted electronic ballot and the encrypted symmetric key using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of the registered voter, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the voted electronic ballot.

31. (Original) The method of claim 30, comprising:

decrypting the encrypted symmetric key using a private key of the public-private key pair of the transaction repository server;

decrypting the encrypted voted electronic ballot using the symmetric key to recover the voted electronic ballot; and

printing the voted electronic ballot.

32. (Previously Presented) A method for completing and submitting an electronic registration form and an electronic ballot over a network, comprising the steps of:

transmitting a blank electronic registration form, upon request at a first computer, to the first computer; and

transmitting registration information from the first computer to a computer database that resides on a transaction repository server, all of which are networked together, to establish a registered voter, so that a voted electronic ballot can be transmitted from a second computer.

33. (Currently Amended) The method of claim 32, comprising:

transmitting a blank electronic ballot, upon request by the registered voter at a the second computer, from the computer database that resides on the transaction repository server to the second computer.

34. (Original) The method of claim 33, wherein the second computer is the first computer.

35. (Original) The method of claim 33, comprising:

transmitting a voted electronic ballot from the second computer to the computer database that resides on the transaction repository server.

36. (Original) The method of claim 32, wherein the step of transmitting registration information comprises:

entering the registration information; and

digitally signing the registration information using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of a citizen, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the registration information.

37. (Original) The method of claim 36, wherein the public-private key pair and the cryptographic identification can be used by the citizen with respect to a plurality of electronic transactions.

38. (Original) The method of claim 33, the step of transmitting a blank electronic ballot comprises:



digitally signing the blank electronic ballot using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of an operator of the transaction repository server, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the blank electronic ballot; and

transmitting a public key of a public-private key pair of the transaction repository server.

39. (Original) The method of claim 35, wherein the step of transmitting the voted electronic ballot comprises:

executing the blank electronic ballot;

encrypting the voted electronic ballot using a symmetric cryptographic function and a symmetric key that is randomly generated by the second computer;

encrypting the symmetric key using a public key of a public-private key pair of the transaction repository server; and

digitally signing the encrypted voted electronic ballot and the encrypted symmetric key using a private key of a public-private key pair, wherein the public-private key pair is generated using an asymmetric cryptographic function, wherein a public key of the public-private key pair is associated with a cryptographic identification of the registered voter, and wherein the public-private key pair and the cryptographic identification are created prior to transmitting the voted electronic ballot.

40. (Original) The method of claim 39, comprising:

decrypting the encrypted symmetric key using a private key of the public-private key pair of the transaction repository server;

decrypting the encrypted voted electronic ballot using the symmetric key to recover the voted electronic ballot; and

printing the voted electronic ballot.

41. (Previously Presented) A system for completing and submitting an electronic voter registration form and an electronic ballot over a network, comprising:

a transaction repository server for transmitting a blank electronic ballot to a first computer;

a computer database, accessible by the transaction repository server, for storing the blank electronic ballot; and

a transaction mediator for communicating information between the transaction repository server and the first computer, the transaction mediator being operative to transmit registration information from the first computer to the computer database to establish a registered voter, so that a voted electronic ballot can be transmitted from a second computer.

42. (Original) The system of claim 41, wherein the transaction mediator is operative to transmit the voted electronic ballot from the first computer to the computer database.

43. (Original) The system of claim 42, wherein the first computer comprises multiple computers.

44. (Original) The system of claim 41, comprising:  
an encrypted communication channel between the first computer and the transaction mediator, and an encrypted communication channel between the transaction mediator and the transaction repository server.

45. (Original) The system of claim 41, wherein the registration information includes at least one descriptive element associated with the citizen.

46. (Previously Presented) A system for verifying at least one of a voter registration status and an electronic ballot status in a voting system, comprising:

a first computer connected to a computer network by which a citizen can request at least one of the citizen's voter registration status and the citizen's electronic ballot status from a transaction repository server; and

at least one computer database, accessible by the transaction repository server, for containing information associated with at least one of the voter registration status of a citizen and the electronic ballot status;

the transaction repository server being operative for determining a status message in response to the status request by examining the at least one computer database, and for transmitting the status message to the first computer.

47. (Original) The system of claim 46, wherein the voter registration status of the citizen and the electronic ballot status are verified.

## **IX. EVIDENCE APPENDIX**

None

## **X. RELATED PROCEEDINGS APPENDIX**

None